What is claimed is:

1. A device for regulating the rotational speed of the driven rotor of a viscosity coupling (liquid friction coupling) of a motor vehicle cooling system, in particular the fan of the cooling system, having a setting means that controls the effective liquid flow supplied to the viscosity coupling in accordance with a setting signal, and having a regulator that supplies the setting unit with a setting signal depending on the deviation of a measured actual speed value from a target speed value, characterized in that the setting unit is supplied with the setting signal (10) by way of a switch unit (28) switchable between a first switch position in which the setting signal of the regulator (20) is supplied and a second switch position in which a target setting signal (GPWM) is supplied, and in that the switch unit (38) is switched automatically from the first switch position into the second switch position when no measured actual speed value (32) is present.

2. The device according to claim 1, characterized in that a control diagram (12) calculates a target speed setting signal (GPWM) from operating data (14, 16) of the motor vehicle, in that said target speed setting signal (GPWM) is fed firstly to the regulator (20) and secondly, by way of the switch unit (28) in its second switch position, to the setting unit.

3. The device according to claim 1, characterized in that an operation amplifier (34) ascertains the presence or absence of the actual speed signal (32) and switches the switch unit (28) accordingly.

4. The device according to claim 2, characterized in that an operation amplifier (34) ascertains the presence or absence of the actual speed signal (32) and switches the switch unit (28) accordingly.